

Amendments to the Claims

The listing of claims below is intended to replace all prior listings of claims presented in the above-identified application.

1. (Currently Amended) A method of inducing addition of neurons in post-natal and adult brain comprising:

providing a nucleic acid construct encoding a ~~neurotrophic factor selected from the group consisting of brain-derived neurotrophic factor, noggin, and brain-derived neurotrophic factor in combination with noggin and~~

injecting the nucleic acid construct into a subject's lateral ventricles or ventricular wall zone under conditions effective to express the neurotrophic factor and to induce addition of neurons in any one or all of the caudate nucleus and the putamen of the subject.

2. (Original) A method according to claim 1, wherein the nucleic acid construct is in a viral vector.

3. (Original) A method according to claim 2, wherein the viral vector is an adenoviral vector, a lentiviral vector, a retroviral vector, an adeno-associated viral vector, or a combination thereof.

4. (Currently Amended) A method according to claim 1, wherein the nucleic acid construct further comprises a constitutive promoter for controlling expression of the brain-derived neurotrophic factor.

5. (Currently Amended) A method according to claim 1, wherein the nucleic acid construct further comprises a cell-specific promoter for controlling expression of the brain-derived neurotrophic factor.

6. (Currently Amended) A method according to claim 1, wherein the nucleic acid construct further comprises an inducible or conditional promoter for controlling expression of the brain-derived neurotrophic factor.

7-12. (Canceled).

13. (Currently Amended) A method of inducing addition of neurons to a subject's brain comprising:

providing a nucleic acid construct encoding a ~~neurotrophic factor selected from the group consisting of brain-derived neurotrophic factor, noggin, and brain-derived neurotrophic factor in combination with noggin and~~

injecting the nucleic acid construct into the subject's lateral ventricles or ventricular wall zone under conditions effective to express the neurotrophic factor and to recruit addition of neurons to any one or all of the caudate nucleus and the putamen of the subject.

14. (Original) A method according to claim 13, wherein the nucleic acid construct is in a viral vector.

15. (Original) A method according to claim 14, wherein the viral vector is an adenoviral vector, a lentiviral vector, a retroviral vector, an adeno-associated viral vector, or a combination thereof.

16. (Currently Amended) A method according to claim 13, wherein the nucleic acid construct further comprises a constitutive promoter for controlling expression of the brain-derived neurotrophic factor.

17. (Currently Amended) A method according to claim 13, wherein the nucleic acid construct further comprises a cell-specific promoter for controlling expression of the brain-derived neurotrophic factor.

18. (Currently Amended) A method according to claim 13, wherein the nucleic acid construct further comprises an inducible or conditional promoter for controlling expression of the brain-derived neutrophic factor.

19-27. (Canceled)

28. (Currently Amended) A method of treating a neurodegenerative condition of the neostriatum comprising:

providing a nucleic acid construct encoding a ~~neurotrophic factor selected from the group consisting of brain-derived neurotrophic factor, noggin, and brain-derived neurotrophic factor in combination with noggin and~~

injecting the nucleic acid construct into a subject's lateral ventricles or ventricular zone wall under conditions effective to treat a neurodegenerative condition of the neostriatum.

29. (Original) A method according to claim 28, wherein the neurodegenerative condition is selected from the group consisting of Huntington's Disease, Parkinson's Disease, amyotrophic lateral sclerosis, multiple sclerosis, stroke, and traumatic injury to the brain and spinal cord.

30. (Original) A method according to claim 29, wherein the neurodegenerative condition is Huntington's Disease.

31. (Original) A method according to claim 29, wherein the neurodegenerative condition is traumatic brain injury.

32. (Original) A method according to claim 29, wherein the neurodegenerative condition is stroke.

33. (Original) A method according to claim 28, wherein the nucleic acid construct is in a viral vector.

34. (Original) A method according to claim 33, wherein the viral vector is an adenoviral vector, a lentiviral vector, a retroviral vector, an adeno-associated viral vector, or a combination thereof.

35. (Currently Amended) A method according to claim 28, wherein the nucleic acid construct further comprises a constitutive promoter for controlling expression of the brain-derived neurotrophic factor.

36. (Currently Amended) A method according to claim 28, wherein the nucleic acid construct further comprises a cell specific promoter for controlling expression of the brain-derived neurotrophic factor.

37. (Currently Amended) A method according to claim 28, wherein the nucleic acid construct further comprises an inducible or conditional promoter for controlling expression of the brain-derived neutrophic factor.

38-43. (Cancelled)

44. (Amended) A method of treating a neurodegenerative condition of the neostriatum comprising:

providing a ~~neurotrophic factor selected from the group consisting of~~ brain-derived neurotrophic factor, ~~noggin, and brain-derived neurotrophic factor in combination with noggin and~~

introducing the neurotrophic factor into any one or all of a subject's caudate nucleus and putamen under conditions effective to treat a neurodegenerative condition of the neostriatum.

45. (Original) A method according to claim 44, wherein the neurodegenerative condition is selected from the group consisting of Huntington's Disease, Parkinson's Disease, amyotrophic lateral sclerosis, multiple sclerosis, stroke, and traumatic injury to the brain and spinal cord.

46. (Original) A method according to claim 45, wherein the neurodegenerative condition is Huntington's Disease.

47-54. (Cancelled)

55. (New) The method of claim 1 further comprising:
injecting a nucleic acid construct encoding noggin into the subject's lateral ventricles or ventricular wall zone.

56. (New) The method of claim 13 further comprising:
injecting a nucleic acid construct encoding noggin into the subject's
lateral ventricles or ventricular wall zone.

57. (New) The method of claim 28 further comprising:
injecting a nucleic acid construct encoding noggin into the subject's
lateral ventricles or ventricular wall zone.

58. (New) The method of claim 44 further comprising:
injecting a nucleic acid construct encoding noggin into the subject's
caudate nucleus and putamen.